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WAR FOOD ADMINISTRATION
Office of Marketing Services
Dairy and Poultry Branch

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The Wartime Dairy Program

First consideration in planning the wartime dairy program has been given to increasing the supply of dairy products available for human consumption, without too much disruption of the dairy industry and without creating too many post-war problems.

The total supply of dairy products available for human consumption has been increased in three ways during the war years.

1. By increasing the production of milk on farms from 109½ billion pounds in 1940 to a level that is expected to exceed 120 billion in 1945.
2. By farmers selling a larger proportion of their total production as whole milk rather than as farm-separated cream--thus increasing our commercial whole milk supply from 47 billion pounds in 1940 to 64½ billion in 1944.
3. By producing nonfat dry milk solids for human consumption from skim milk that was formerly used for animal feed dry skim milk and for casein--close to 3 billion pounds of skim milk being diverted in this way from nonfood to food use between 1940 and 1944.

Rapid increases in milk production, such as can be made with hogs and poultry, are impossible. There always has been, however, a large potential supply of human food on farms in the skim milk fed to hogs and poultry. This was rapidly made available for human consumption.

This shift was extremely significant because the nonfat milk solids in milk (about 8.7 pounds per cwt. of milk) contain the milk proteins, the milk sugar, and certain minerals and water-soluble vitamins. The nonfat milk solids are an important source of the calcium needed for sound bones and teeth. The nonfat milk solids, also, contain a supply of phosphorus, and water-soluble vitamins such as riboflavin, thiamin, and niacin. Prior to this shift, while most of the nutritionally valuable fats and fat-soluble vitamins in milk were being used for human consumption, much of the nutrients of the nonfat milk solids were not being used.

These nonfat milk solids could be made available in a number of ways of which the following are important and result in products that are needed for military and Lend-Lease. These ways also utilize the butterfat and fat-soluble vitamins in milk.

1. Nonfat dry milk solids (with the fat used for butter or cream).
2. Evaporated milk.
3. Cheddar cheese.
4. Fluid milk.

Historically the butter industry of this country has been based on farm-separated cream rather than on whole milk. In order to utilize the skim milk available from buttermaking a facilities program was initiated and over 200 plants were built. Practically all of the plants were for the production of nonfat dry milk solids and therefore made possible a greater utilization of the nonfat milk solids in connection with butter-making.

Fortunately for the wartime dairy program there was a great deal of unused processing and distributing capacity for evaporated milk, cheddar cheese, and fluid milk. Had it not been for this capacity it would have been impossible to have handled the additional 17 billion pounds of whole milk delivered to plants and dealers in 1944 as compared with 1940. The 17 billion pounds was an increase of 37 percent over 1940 whole milk deliveries and resulted from the larger 1944 milk production and the greater proportion of that production sold as whole milk rather than as farm-separated cream.

This very substantial increase in whole milk deliveries by farmers combined with the processing capacity that was fortunately available, the ingenuity of management and the long hours of work by plant labor, has made possible extraordinary increases in the production of cheddar cheese and evaporated milk. Estimated production of cheddar cheese in 1945 will be 850 to 900 million pounds as compared with 600 million pounds in 1940. Production of evaporated milk in 1945 will be close to 90 million cases, whereas it was only 56½ million cases in 1940.

Even with these extraordinary increases in production, military and Lend-Lease requirements for these products have been so great that substantial decreases below prewar levels in civilian supplies have been unavoidable.

Military demands to meet the extreme conditions of the Pacific area have called for even more extraordinary increases in the production of certain whole milk products. Dry whole milk powder production which never reached 30 million pounds before 1941 will approximate 225 million pounds during 1945, a seven-fold increase. It is anticipated that more than three-fourths of 1945 production will go to the war services.

The armed forces are requesting a production of 150 million pounds of dry ice cream mix during 1945 as compared with a negligible pre-war production. The increased production of 195 million pounds of dry whole milk and 150

pounds of dry ice cream mix will require an amount of butterfat sufficient to make 110 million pounds of butter.

These changes in the utilization of manufacturing milk were necessary to meet war service needs and maintain a minimum civilian supply--especially of evaporated milk.

In addition to these changes, per capita consumption of fluid milk has increased 20 to 25 percent during the last 5 years in this country. The greater utilization of milk in fluid form by civilians has been an important factor in the civilian diet during the war years. Principally as a result of the heavy fluid milk consumption, protein supplies are 10 percent above prewar, and calcium 20 percent. About half of the calcium of the average civilian diet in 1945, 15 percent of the protein and 30 percent of the riboflavin, will come from fluid milk and cream.

While these extraordinary changes in milk utilization will create some post-war problems they were necessary to increase the supply of dairy products available for human consumption, to meet war needs, and to utilize existing processing capacity. An effort has been made to keep changes in the dairy industry to a minimum consistent with the objective of maximum food production.

The principal device used has been limitation orders restricting the production of dairy products not wanted by the military services, not widely consumed by the civilian population, or the consumption of which fluctuates widely with depression and prosperity. War Food Orders 92 and 93 are examples of the first category. These orders are designed to prevent shifts away from types of cheese and dried milk required by the war services to other types. War Food Order 13 prohibits the sale of heavy cream to help maintain butter production which is more widely consumed. War Food Orders 8 and 79 limit the sales of ice cream and fluid milk and cream, the consumption of which tends to increase in periods of prosperity. These orders were designed to maintain as nearly a normal utilization of milk as was consistent with obtaining maximum food production and utilization.

Many of the changes in milk utilization that have been required by war needs will not be permanent. Careful consideration should be given to reconversion to peace conditions as soon as the requirements of war permit.

